

**LISTING OF THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A fiber-to-the home (FTTH) system, comprising:
  - at least one digital home communications terminal (DHCT) for receiving forward signals from a headend facility and for transmitting reverse RF signals to the headend facility, the reverse RF signals including header information and payload data;
  - a single wire and return device (SWRD) for receiving the reverse RF signals from the at least one DHCT, demodulating the reverse RF signals via an upstream demodulator, and converting the demodulated signals to Ethernet signals;
  - an optical network terminal (ONT) coupled to the SWRD for converting the Ethernet signals to optical signals, and for transmitting the optical signals to the headend facility via optical fiber; and
  - a plurality of downstream modulators located in the headend facility remote from the upstream demodulator with each downstream modulator associated with at least one corresponding DHCT and having an identification number that is inserted into the forward signals from the headend facility to identify that downstream modulator to the at least one corresponding DHCT, one of ~~said~~ the downstream modulators associated with the at least one DHCT for receiving signals corresponding to the optical signals and for sending the forward signals downstream to the at least one corresponding DHCT via the ONT;

wherein the at least one DHCT inserts the modulator identification number received within the forward signals from the headend facility into the reverse header information, and wherein the SWRD converts the modulator identification number within the reverse header information into an Internet Protocol address to enable the reverse signals to be directed to ~~said~~ the one downstream modulator.

2. (Previously Presented) The FTTH system of claim 1, wherein the SWRD comprises:

a diplex filter coupled for filtering forward signals and the reverse RF signals;  
the upstream demodulator coupled to the diplex filter for demodulating the  
reverse RF signals;

a microprocessor for converting the demodulated signals to Ethernet signals; and  
a switch for receiving the Ethernet signals and any additional signals from a  
second source, the switch for combining the signals and for providing a combined signal  
to the ONT.

3. (Previously Presented) The FTTH system of claim 2, wherein the SWRD  
converts the identification number into the Internet Protocol address via the microprocessor.

4. (Original) The FTTH system of claim 1, wherein the ONT receives the forward  
signals, wherein the forward signals comprise at least one of a telephone signal, Ethernet signals,  
data signals, and audio/video signals, and wherein the ONT provides the at least one of Ethernet  
signals, data signals, and audio/video signals to the SWRD and provides the telephone signals to  
a connected telephone.

5. (Currently Amended) A method for transmitting reverse signals in a fiber-to-the-  
home (FTTH) network, the FTTH network including a forward path and a reverse path, the  
method comprising:

receiving forward signals from a headend facility and generating a reverse RF  
modulated signal in a digital host communications terminal (DHCT), wherein a plurality  
of downstream modulators are located in the headend facility with each downstream  
modulator associated with at least one corresponding DHCT and having an identification  
number that is inserted into the forward signals from the headend facility to identify that  
downstream modulator, and wherein ~~said~~ the reverse RF modulated signal includes the  
identification number of the downstream modulator associated with the DHCT in header  
information;

providing the reverse RF modulated signal via coaxial cable to a single wire  
return device (SWRD);

demodulating the reverse RF modulated signal via coaxial cable to a single wire  
return device (SWRD);

demodulating the reverse RF modulated signal via an upstream demodulator remote from ~~said~~ the plurality of downstream modulators to provide a reverse demodulated signal;

processing the reverse demodulated signal to provide a reverse Ethernet signal, wherein the identification number is converted into an Internet Protocol address that enables the reverse Ethernet signal to be directed to the associated downstream modulator;

converting the reverse Ethernet signal to a reverse optical signal in an optical network terminal (ONT); and

receiving signals corresponding to the reverse optical signal at the associated downstream modulator located in the headend facility, wherein the downstream modulator transmits a forward signal to the at least one corresponding DHCT via the ONT in response to the received reverse optical signal.

6. (Previously Presented) The method of claim 5, wherein the DHCT stores the identification number and inserts the received identification number into the reverse header information prior to transmitting to the SWRD.

7. (Cancelled).

8. (Previously Presented) The method of claim 5, further comprising:

receiving the forward signals at the ONT, wherein the forward signals comprise at least one of a telephone signal, Ethernet signals, data signals, and audio/video signals, and wherein the ONT provides the at least one of Ethernet signals, data signals, and audio/video signals to the SWRD and provides the telephone signals to a connected telephone.